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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,255	01/26/2004	Takamitsu Yamada	R2180.0188/P188	7512

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EXAMINER
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CHUNG, PHUNG M

ART UNIT	PAPER NUMBER
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2138

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/763,255

**Applicant(s)**

YAMADA ET AL.

**Examiner**

Phung My Chung

**Art Unit**

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/26/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

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1. The abstract of the invention is objected to because it contains more than 50 words and it contains the language that can be implied (i.e. "disclosed"). Appropriate correction is required.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, lines 1-4, the preamble of the claim is "A method for performing scan test on a semiconductor integrated circuit..." but in the body of the claim there isn't any step that performing scan test on a semiconductor integrated circuit. Appropriate correction is required.

As per claim 2, line 1, the preamble of the claim is "A semiconductor integrated circuit for use in a scan test operation" but in the body of the claim there isn't any means or element that perform scan test operation. Appropriate correction is required.

As per claims 3-6, these claims are also rejected because they dependent upon the rejected based claim.

As per claim 7, lines 1 and 3, "capable of" a positive term should be used. For a suggestion, it should be changed to - - for - -.

In addition, lines 1-2, the preamble of the claim is "A semiconductor integrated circuit capable of (for) performing a scan test" but there isn't any means or element that performing a scan test in the body of the claim. Appropriate correction is required.

As per claims 8-11, these claims are also rejected because they dependent upon the rejected based claim.

As per claim 12, lines 1-2, the preamble of the claim is "A tester for applying a scan test on an integrated circuit" but there isn't any element or circuit or means for applying a scan test on the integrated circuit.

As per claims 13, this claim is also rejected because it depends upon the rejected based claim.

As per claim 14, line 1, the period "." after "further" should be deleted.

As per claim 15, lines 1 and 3, "capable of" a positive term should be used. For a suggestion, it should be changed to - - for - -.

In addition, lines 1-2, the preamble of the claim is "A semiconductor integrated circuit capable of (for) performing a scan test" but there isn't any means or element that performing a scan test in the body of the claim. Appropriate correction is required.

As per claims 16-19, these claims are also rejected because they dependent upon the rejected based claim.

As per claim 20, lines 1 and 3, "capable of" a positive term should be used. For a suggestion, it should be changed to - - for - -.

In addition, lines 1-2, the preamble of the claim is "A semiconductor integrated circuit capable of (for) performing a scan test" but there isn't any means or element that performing a scan test in the body of the claim. Appropriate correction is required.

As per claims 21-24, these claims are also rejected because they dependent upon the rejected based claim.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-2, 7, 12-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang

et al ("A Token Scan Architecture for Low Power Testing" IEEE, 2001) in view of Baeg (6,018,815).

As per claim 2, Huang et al disclose an apparatus, comprising:

At least two blocks (group 1 and group 2) to be tested each capable of performing active functions; and

An input terminal for inputting a plurality of scan clocks to each of the at least two blocks, the plurality of scan clocks each having a phase different from each other. (Figure 10, pages 664-665, section 3.2). Huang et al do not disclose a semiconductor integrated circuit for use in a scan test operation. Huang et al do not disclose An isolation unit for isolating each of the at least two blocks to be tested exclusively from further blocks. However, Baeg discloses an isolation unit (141) for isolating each of the at least two blocks (151) and (167) to be tested exclusively from further blocks (col. 5, lines 21-29). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the isolation unit (141) as taught by Baeg into the invention of Huang et al for isolating each of the at least two blocks (151) and (167) to be tested exclusively from further blocks during a single internal scan operation.

As per claims 1, 7, 15 and 20, these claims are rejected under similar rationale as set forth in the system claim 2.

As per claim 12, Huang et al disclose an apparatus, comprising:

A circuit that isolates at least two blocks of an integrated circuit to be tested from further blocks of the circuit and supplies a plurality of scan clocks to each of the at least

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two blocks, the plurality of scan clocks each having a phase different from each other. (Figure 10, pgs. 664-665, section 3.2). Huang et al do not disclose that the isolation circuit that exclusively isolates the at least two blocks from further blocks. However, Baeg discloses an isolation unit (141) for isolating each of the at least two blocks (151) and (167) to be tested exclusively from further blocks (col. 5, lines 21-29). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the isolation unit (141) as taught by Baeg into the invention of Huang et al for isolating each of the at least two blocks (151) and (167) to be tested exclusively from further blocks during a single internal scan operation.

As per claims 13-14, Huang et al further disclose an isolation unit and an input terminal for inputting the plurality of scan clocks to each of the at least two blocks.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phung My Chung  
Primary Patent Examiner  
Art Unit 2138